REMARKS

In view of the above amendments and the following remarks, reconsideration of the outstanding office action is respectfully requested.

Applicants affirm the election of Group I (i.e., claims 1-21 and 34) with traverse. Applicants traverse the restriction requirement on the basis that all groups of the invention are closely related and can be searched together without undue burden. In particular, applicants request that Groups I and III can be examined together given that claim 35 (of Group III) requires the use of the biological sensor of claim 1. Even if the U.S. Patent and Trademark Office refuses to rejoin Group III at this time, applicants respectfully request the rejoinder of claims 35-38 upon allowance of claim 1.

The drawings objected to have been corrected, and corrected drawings are submitted herewith. The correction to Figure 3A involves the insertion of "(Prior Art)" next to the figure label. Figures 3A and 3B now appear on separate sheets.

The rejection of claims 1-22 and 34 under 35 U.S.C. § 112, second paragraph, for indefiniteness is respectfully traversed in view of the above amendment to claim 1.

The rejection of claims 1, 6-8, 10-15, 18, 20, 21, and 34 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,248,539 to Ghadiri et al. ("Ghadiri") is respectfully traversed. Ghadiri teaches an interferometric sensor that includes a porous semiconductor cavity that is specific for a desired analyte. The porous semiconductor cavity includes a porous semiconductor layer that is characterized by, *inter alia*, a relatively consistent porosity (column 3, lines 6-11). Ghadiri makes no mention of a porous semiconductor microcavity positioned between two Bragg reflectors (i.e., having alternating strata of higher/lower porosity). Thus, Ghadiri fails to teach or suggest each and every limitation of the claimed invention, particularly the use of a porous semiconductor structure that includes "a central layer interposed between upper and lower layers, each of the upper and lower layers including strata of alternating porosity" as recited in claim 1 (emphasis added).

Because Ghadiri fails to teach or suggest each and every limitation of the presently claimed invention, and in fact teaches away from the present invention, applicants respectfully submit that the rejection of claims 1, 6-8, 10-15, 18, 20, 21, and 34 under 35 U.S.C. § 102(e) is improper and should be withdrawn.

The rejection of claims 1-7, 11-16, 18-19, 21, and 34 under 35 U.S.C. §§ 102(a) or 102(b) as being anticipated by Chan et al., "Nanoscale Microcavities for Biomedical Sensor Applications," *Proceedings of SPIE* 3912:23-34 (2000) ("Chan I") is respectfully traversed.

Applicants submit that Chan I is not available as prior art under either §102(a) or §102(b). The attached Declaration of Hilary Garrett under 37 C.F.R. § 1.132 ("Garrett Declaration") demonstrates that Chan I is not prior art under § 102(b) because Chan I became available to the public on March 14, 2000 (Garrett Declaration, ¶ 4), which is less than one year prior to the filing of the priority application of the present invention. Thus, in view of the Garrett Declaration, Chan I is not available as prior art under § 102(b).

Furthermore, the attached Declaration of Philippe M. Fauchet under 37 C.F.R. § 1.132 ("Fauchet Declaration") demonstrates that Chan I is not prior art under § 102(a) because Chan I does not evidence knowledge or use of the claimed invention by others in this country prior to the invention by the applicants of the above-identified application. Specifically, Dr. Fauchet has declared that "[t]he claimed invention of the above-identified application was conceived by me and...co-inventors [Selena Chan, Scott Horner, and Benjamin L. Miller]" (Fauchet Declaration, ¶ 7). Dr. Fauchet has further declared that in making the claimed invention, "experiments were conducted by us or under the direction and control of either me or one of [my] co-inventors..." (*Id.*). Moreover, Dr. Fauchet indicated that the remaining coauthors of Chan I (Yi Li and Lewis J. Rothberg) did not contribute to the conception of the invention as described and now claimed in the present application (see Fauchet Declaration, ¶ 8). Thus, in view of the Fauchet Declaration, Chan I is not available as prior art under 35 U.S.C. § 102(a). *See In re Katz*, 687 F.2d 450, 215 USPQ 14 (CCPA 1982).

Therefore the rejection of claims 1-7, 11-16, 18-19, 21, and 34 under 35 U.S.C. §§ 102(a) or 102(b) is improper and should be withdrawn.

The rejection of claims 1-7, 9-16, 21, and 34 under 35 U.S.C. §§ 102(a) or 102(b) as being anticipated by Chan et al., "Nanoscale Silicon Microcavity Optical Sensors for Biological Applications," *Materials Research Society Proceedings Symposium F* 638:10.4.1-10.4.6 (2000) ("Chan II") is respectfully traversed.

Applicants submit that Chan II is not available as prior art under either §102(a) or §102(b). The Garrett Declaration demonstrates that Chan II was published on October 26, 2001 (Garrett Declaration, ¶ 5). The Fauchet Declaration demonstrates that Chan

II was published online on August 23, 2001 (Fauchet Declaration, ¶ 9). Since both of these publication dates occurred after the priority filing date of the present application, Chan II is not prior art under either 35 U.S.C. §§ 102(b) or 102(a).

Therefore, the rejection of claims 1-7, 9-16, 21, and 34 under 35 U.S.C. §§ 102(a) or 102(b) is improper and should be withdrawn.

The rejection of claims 1-7, 11-16, 18-19, 21, and 34 under 35 U.S.C. §§ 102(a) or 102(b) as being anticipated by Chan et al., "Porous Silicon Microcavities for Biosensing Applications," *Phys. Stat. Sol. (a)* 182:541-546 (2000) ("Chan III") is respectfully traversed.

Applicants submit that Chan III is not available as prior art under either §102(a) or §102(b). The attached Garrett Declaration demonstrates that Chan III is not prior art under § 102(b) because Chan III became available to the public, at the earliest, on November 15, 2000 (Garrett Declaration, ¶ 6), which is less than one year prior to the filing of the priority application of the present invention. Thus, in view of the Garrett Declaration, Chan III is not available as prior art under § 102(b).

Furthermore, the attached Fauchet Declaration demonstrates that Chan III is not prior art under § 102(a), for the same reasons described above with respect to Chan I.

Therefore, the rejection of claims 1-7, 11-16, 18-19, 21, and 34 under 35 U.S.C. §§ 102(a) or 102(b) is improper and should be withdrawn.

In view of all of the foregoing, applicant submits that this case is in condition for allowance and such allowance is earnestly solicited.

Respectfully submitted,

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Date: 11/6/03	Jane C. Wirszyla